Application No. 09/894,843
Amendment dated June 1, 2005
Reply to Office Action dated March 29, 2005

PATENT

Amendments to the Drawings:

The attached sheets of drawings include changes to Figs. 1 and 6B. These two sheets replace the original two sheets for Figs. 1 and 6B.

Attachment: 2 Replacement Sheets
              2 Annotated Sheets Showing Changes

REMARKS/ARGUMENTS

This Amendment is in response to the Office Action dated March 29, 2005, in which the Examiner rejected claims 1-8. The Examiner rejected (1) claims 2, 3, 6 and 7 under 35 U.S.C. § 112, second paragraph, as being indefinite, (2) rejected claims 1-3 and 5-7 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,297,144 ("**Gilbert**"), and (3) rejected claims 4 and 8 under 35 U.S.C. § 103(a) as being unpatentable over **Gilbert** in view of US Patent No. 5,815,667 ("**Chien**").

Specification

The Specification has been amended at pages 8, 9, 10 and 11 in order to correct the informalities pointed out by the Examiner.

Drawings

Applicants have corrected Figs. 1 and 6B of the drawings in order to correct the redundant use of the reference characters "16" and "22."

Claims

By the present Amendment, Applicants have cancelled independent claims 1 and 5 (replacing those claims with new independent claims 9 and 10), have amended claims 2-4 and 6-8, and have added new claims 11-18. Thus, claims 2-4 and 6-18 are now pending.

It is believed that new claims 9 and 10, and the amendments to claims 2, 3, 6 and 7, overcome the objections to claims 2 and 6 (by removing the inconsistent references to "congested node" and "controlling node"), and overcome the rejection of claims 2, 3, 6 and 7 under 35 U.S.C. § 112 (by removing the ambiguity of the "direction of flow of the requests" noted by the Examiner in connection with claims 2 and 6, removing the confusing use of the transitional term "thereafter" in claim 2, and clarifying that the acknowledgements are received from the "controlling node" in claims 3 and 7).

As to the rejection of the claims under 35 U.S.C. § 102 and 35 U.S.C. § 103, Applicants respectfully traverse such rejection.

As stated in the specification and as now clearly recited in the subject matter of claim 9, Applicants' invention is directed to providing access to a congested controlling node for other client or contending nodes in a mesh network. The mesh network is characterized by multiple communication nodes in a network where at least one or more nodes may be both a controlling node and a requesting node for purposes of transmitting data through the mesh network (see, e.g., page 7, lines 3-4). In order to provide access to a controlling node for a plurality of contending nodes, the method of the invention (as represented by claim 9) includes the steps of withholding requests by contending nodes until receipt of a pool request packet (PRP) from a controlling node, broadcasting the PRP when the controlling node is ready to provide service, directing a poll request or packet from the contending node in order to request access to the controlling node, and broadcasting a control packet or contention resolution packet (CRP) from the controlling node to all of the plurality of contending nodes, where the CRP contains rules information (e.g., times to send and receive data) for contending nodes to follow.

As explained in the specification, broadcasting the PRP and CRP to the plurality contending or client nodes provides identical information (timing, load, availability, etc.) to all of the client nodes in order to synchronize transmissions and establish efficient and more orderly allocation of resources among the client nodes (see, e.g., page 5, lines 9-16, and page 8, lines 8-16).

Gilbert, the primary reference relied upon by the Examiner, has a different purpose, structure and function than Applicants' invention. Unlike the mesh network of Applicants' invention, the **Gilbert** system provides data transfer between a central station and a plurality of remote stations over a single channel using a noncontention-based protocol (see Abstract, and column 3, lines 15-20). The protocol uses a two stage process, wherein a reservation sync (RS) frame 52 is periodically transmitted (e.g., once every second), with each remote station having a pre-assigned waiting period or time slot TS during which it can respond

with a reservation request RR (column 7, lines 35-50). During the second stage, the central station sequentially addresses (using poll frames P) only those remote stations that made reservations during the first cycle, so that a remote station can reply with a data packet during a DATA frame immediately following its poll frame P (column 7, line 63, through column 8, line 12). Thus, **Gilbert** does not disclose or teach a mesh network, nor does it disclose or teach a protocol where client nodes are, in fact, <u>contending</u> for access for a controlling node, nor does it disclose or teach a protocol where, in response to a poll request from the client nodes, an informational "control packet" is broadcast to <u>all</u> of the plurality of client nodes.

In particular, **Gilbert** (either alone or in conjunction with **Chien**) does not disclose or teach various limitations of claim 9, such as a mesh network where "one or more nodes may be either a contending node when sending data for transmission within the mesh network or a controlling node for receiving data for transmission within the network," where the protocol provides "contending nodes with access to a <u>congested</u> controlling node," and where a "control packet" is broadcast to "all of the plurality of contending nodes" and contains "rules information for each contending node . . . to follow in order to send data to the controlling node." Similar limitations are also recited in apparatus claim 10. Claims 2-4 and 6-8 depend from claims 10 and 11 and recite further limitations and are believed distinguishable for the same reasons.

New independent claim 11 recites subject matter similar to that in claims 9 and 10, but with the additional recitation of "broadcasting from the controlling node a broadcast acknowledgement for data received by the controlling node, the broadcast acknowledgement received by all of the plurality of contending nodes, including both winner contending nodes having requested access granted by the controlling node and loser contending nodes not having requested access granted by the controlling node." Such additional limitation is likewise neither disclosed nor taught by **Gilbert** or **Chien**.

New independent claim 18 recites a method for client nodes to access a controlling node in a mesh network, the method having both a non-PRP mode (where client

nodes are not contending for the controlling node) and a PRP mode (where client nodes are contending for access to the controlling node), and where the PRP mode includes steps similar to those recited in claim 11. Claim 18 is likewise believed allowable for the same reasons as stated above.

Conclusion

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.
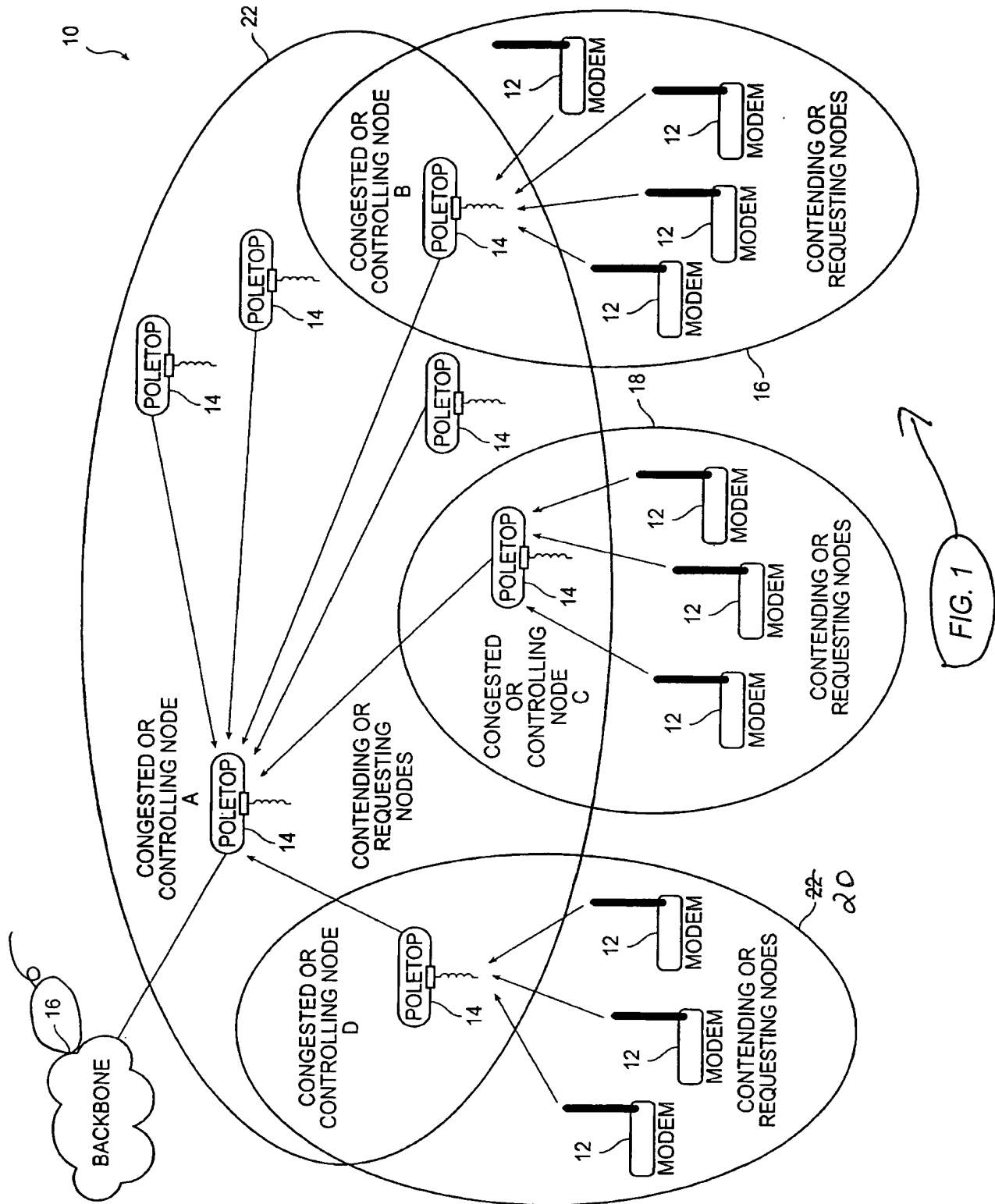
Respectfully submitted,

Date: June 1, 2005

Stephen F. Jewett
Reg. No. 27,565

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
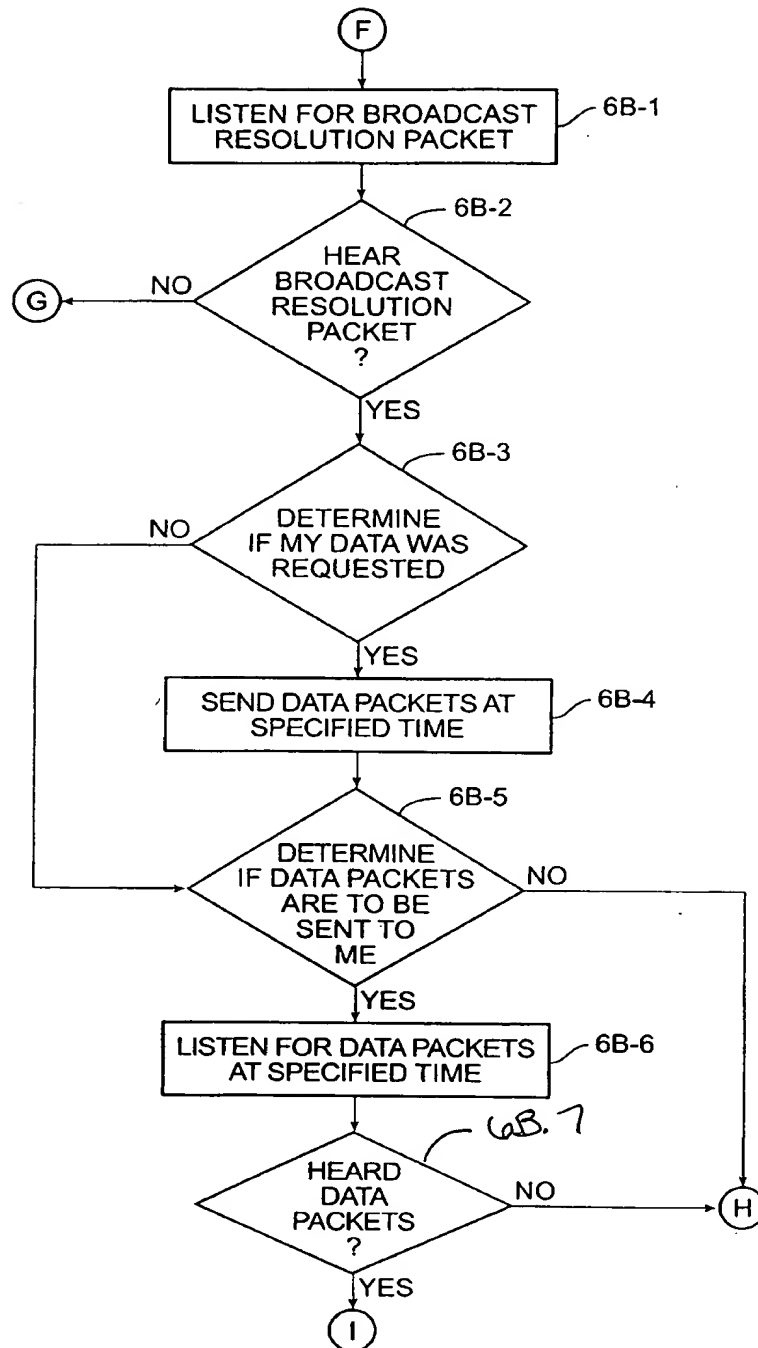Tel: 303-571-4000
Fax: 415-576-0300
SFJ/jln
60494194 v1

FIG. 1

(F)

LISTEN FOR BROADCAST
RESOLUTION PACKET — 6B-1

HEAR
BROADCAST — 6B-2
NO ← RESOLUTION
PACKET
?
(G)

YES

DETERMINE — 6B-3
NO ← IF MY DATA WAS
REQUESTED

YES

SEND DATA PACKETS AT — 6B-4
SPECIFIED TIME

DETERMINE — 6B-5
IF DATA PACKETS
ARE TO BE NO →
SENT TO
ME

YES

LISTEN FOR DATA PACKETS — 6B-6
AT SPECIFIED TIME

6B.7
HEARD
DATA NO → (H)
PACKETS
?

YES

(I)

FIG. 6B